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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/035,720	11/09/2001	Shaffiq Amin Jaffer	8774	4115
27752	7590	11/04/2003		
THE PROCTER & GAMBLE COMPANY INTELLECTUAL PROPERTY DIVISION WINTON HILL TECHNICAL CENTER - BOX 161 6110 CENTER HILL AVENUE CINCINNATI, OH 45224				
			EXAMINER DEL SOLE, JOSEPH S	
			ART UNIT 1722	PAPER NUMBER

DATE MAILED: 11/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/035,720

Applicant(s)

JAFFER ET AL.

Examiner

Joseph S. Del Sole

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2 and 8-18 is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6,7 and 19 is/are rejected.
- 7) ☒ Claim(s) 5 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Terminal Disclaimer

1. The terminal disclaimer filed on 10/1/03 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on Application Number 10/035,726 and has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 19 is rejected under 35 U.S.C. 102(b) as being anticipated by Hill et al (2,803,041).

Hill et al teach a die, that corresponds to the instant die, for extruding flowable material therethrough in a longitudinal direction, the die having a die inlet 16 for admitting flowable material and a die outlet 22 for expelling flowable material, the die inlet and die outlet being oppositely disposed on a longitudinal axis, the die outlet having a cross sectional area defining a die outlet plane having a major axis and a minor axis orthogonal thereto, the major axis being greater than or equal to the minor axis (fig. 2), the die having a cavity 18 connecting the die inlet and the die outlet, the cavity having a plurality of bars (inlet tubes 26) for admitting energy (providing an additional material to the extrudate changes the energy of the composite) that directs

the flow of material in the die cavity (the extrudate must move around the tube), the tubes defining hollow bars which act as a static mixer.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1, 3-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kessler (4,478,516).

Kessler discloses a die 10 for extruding flowable material therethrough in a longitudinal direction, the die having a die inlet (see fig. 1) for admitting flowable material and a die outlet 22 expelling flowable material, the die inlet and die outlet being oppositely disposed on a longitudinal axis, the die outlet having a cross sectional area defining a die outlet plane, the die having a cavity (see fig. 1) connecting the die inlet and the die outlet, the cavity having a plurality of cross sections perpendicular to the longitudinal axis, the cavity having static mixers 30 therein, the static mixer having openings therethrough oriented substantially at an angle relative to the longitudinal direction, filling the cavity at various cross sections, the static mixer causing flowable material to flow in a direction having random components including a first direction having a component parallel to the axes of the die outlet plane and later in a second direction having a component parallel to the axes of the die outlet plane as the flowable material is within the cavity; the static mixer has a static mixer inlet defining a static mixer inlet plane and a static mixer outlet defining a static mixer outlet plane; the die outlet plane, the static mixer inlet plane and the static mixer outlet plane each being flat and mutually parallel (fig. 1); the die having a cross direction orthogonal to the longitudinal direction, wherein the static mixer has a first surface area to void volume ratio coincident the longitudinal axis and a second surface area to void volume ratio at a position spaced from the longitudinal axis in the cross direction, the first ratio being different than the second ratio (fig. 2).

Kessler does not disclose the die outlet plane having a major axis and a minor axis orthogonal thereto, the major axis being greater than or equal to the minor axis.

It would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the shape of the die outlet of Kessler such that the die outlet plane has a major axis and a minor axis orthogonal thereto, the major axis being greater than or equal to the minor axis because it is well known in the extrusion art to modify the shape (i.e., to be rectangular) of die outlet depending upon the desired shape of the product.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kessler (4,478,516) in view of Chen et al (5,372,765).

Chen et al. disclose auxiliary inlets 33 for admitting additives to an extrusion material between a first static mixer 9 and a second static mixer 37.

It would have been obvious to one of ordinary skill in the art at the time the invention was made, to further modify the die with auxiliary inlets between the static mixers because such inlets would admit additives to the extrusion material between static mixers, as disclosed by Chen et al.

Response to Arguments

9. Applicant's arguments filed 10/1/03 have been fully considered but they are not persuasive.

The Applicant's amendment to claim 18 overcomes the 35USC112 second paragraph rejection.

The Applicant argues that the amendment to claim 19, including the requirement of a static mixer having a plurality of bars which admit energy, is not taught by Hill et al.

The Examiner disagrees. As stated in the rejection above, the tubes of Hill statically mix the material and by admitting other materials into the opening, they are changing the energy of the combined materials and thus admitting energy. Claim 19 remains rejected. Claim 20 has been found to contain allowable subject matter.

The applicant argues that the amendment to claim 1, specifically having the static mixer cause flowable material to separately flow in a first direction having a component parallel to the major axis and in a second direction of a component parallel to the minor axis, make the claim allowable. And further that the passages of prior art Kessler converge/ diverge relative to the longitudinal direction of the passages such that they cannot provide for separate flow in a first direction and a second direction.

The Examiner disagrees. The random direction of flow produced by the mixer of Kessler does in fact produce flows parallel to the axes of the outlet plane. Furthermore, flow provided by one passage of Kessler is separate from the flow provided by other passages.

The Applicant argues that independent claim 2 and the claims dependent thereupon are allowable.

The Examiner agrees.

The Applicant argues that Chen et al does not overcome the deficiencies of Kessler in the rejection over claim 1.

The Examiner disagrees. There are not deficiencies in the rejection of claim 1 over Kessler as discussed above. The Chen et al reference is used to show the obviousness of claims 7, 8 and 11. The Applicant does not discuss the limitations of claim 7. As discussed, claims 8 and 11 are found allowable, however claim 7 remains rejected.

Allowable Subject Matter

10. Claims 2 and 8-18 allowed.
11. Claims 5 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
12. The following is a statement of reasons for the indication of allowable subject matter: a die having a plurality of static mixers and a die outlet having a cross sectional area defining a die outlet plane having a major axis and a minor axis orthogonal thereto; the plurality of static mixers being disposed in series between the die inlet and the die outlet whereby at least a portion of the flowable material passes through two or more of the static mixers of the plurality, one mixer has a stage of bars imparting flow to the flowable material in a first direction relative to the longitudinal direction and a second static mix having bars imparting flow to the flowable material in a second direction relative to the longitudinal axis, the first direction and the second direction defining an included angle therebetween of at least 45 degrees; and fails tot each a static mixer outlet plane and a die outlet plane coincident; and a bar of a static mixer having a window substantially transparent to the transmission of energy therethrough.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph S. Del Sole whose telephone number is (703) 308-6295. The examiner can normally be reached on Monday through Friday from 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Wanda Walker, can be reached at (703) 308-0457. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for both non-after finals and for after finals.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Joseph S. Del Sole
J.S.D.
October 28, 2003

[Signature]
ROBERT DAVIS
PRIMARY EXAMINER
GROUP 1300 1722
10/30/03